IT Applications Unit 3  
Week 1  
Chp 1 Problem Solving

**Characteristics of data and information**

1. **For data to become meaningful what means to happen?**For the data to become meaningful it needs to be processed or manipulated.
2. **Distinguish between primary and secondary sources of data?**Primary data is first hand sources where data is obtained from survey, interviews, letters etc. Secondary data is data that has been gathered from published or available work of others.

**Data integrity or valuable to data**For data to be of value it has a number of characteristics.  
Elaborate under each of the following headings, using examples:

1. **Suitability**The data that is entered (either text or numerical) into a computer must be suitable , making sure that it is established at the start and the format should be consistent throughout the data.  
   Eg: entering the 11th March 2010 then later entering it as 11/3/2010. The format needs to be consistent.
2. **Reliability  
   a. How can the reliability of data be checked?**Data’s reliability can be checked by checking the source from where this data came from.
3. **Accuracy**Data must be accurate but it is easy to make mistakes. This is mainly due to human area.  
   EG: Filling in forms and shorting words. Could be mistake for something else. Like putting IT down on VCE forms would either be Information Technology or Italian.
4. **Timeliness**Data needs to be processed while it is still timely (current) making sure it isn’t to early or late.   
   EG: West Indies cricket scores. They played on the 15th Feb but the results weren’t displayed till the 17th Feb. That is leaving it to late.
5. **Freedom from bias  
   a. What influences can result in the introduction of bias into your data?**

**Characteristics of information**Effective decision-making is predicated on information processing certain qualities.  
Elaborate under each of the following qualities of information

1. **Relevant information**
2. **Complete information**
3. **Timely information**
4. **Accurate information**
5. **Unbiased information**

**Information processing steps**There are nine information processing steps. Elaborate under each of the following:

1. **Acquisition**Is to gather or acquire data. Different methods of doing htis is by:  
   Observing  
   Recording Sound  
   Surveying  
   Measuring
2. **Input**Input is where data is put onto a system by one of the following  
   Keyboard  
   Mouse  
   Retina Scanner  
   Touch Screen  
   Input devices allows data to be represented in an electronic format.
3. **Validation**Validation is were the data that has been put into the computer then it is assessed to ensure that it is finished and correct. Ways of doing so are  
   Spell Check  
   Range Check  
   Data Type Check
4. **Manipulation**Manipulation is were information is altered or transformed into a different state  
   Examples of data being manipulated are  
   Sorting data alphabetical or numerical  
   Creating reports in a database  
   Altering still images using graphics software
5. **Storage**Storage is were the data and/or information is stored onto a disc so it can be retvried for later use.  
   Types of storage devices are  
   USB  
   DVD  
   Hard Discs  
   Tape
6. **Retrieval**Retrieval is were the data is taken out of storage and put back onto the main computer system.
7. **Output**Output is were the data/information is either printed or screened so people are able to see it.
8. **Communication (Video conferencing)**Video conferencing is were people conduct a meeting in two or more places via a video link
9. **Disposal or archive**Disposal is were the data/information is deleted or removed from all computer’s and storage.  
   Archive is were the information is stored long term.

**Keyword:** ASIVCMSOCD (All students in video conferencing must stay off cheap drugs)

**Reasons for using information**

1. **What are the four purposes of information?**The four main purposes of information are to inform, educate, entertain and persuade readers.

**Characteristics of audiences**Information should meet the needs of its users

1. **List the factors that must be considered in presenting information?**-Size of audience  
   -Profile  
   -Background  
   -Type of group (age, gender)  
   -Education Level  
   -Background Audience  
   -Special needs  
   -Culture  
   -Location

**Information characteristics in organisations**

1. **What is meant by ‘information flow’?**
2. **List, with examples the four hierarchy levels within an organisation.**-Senior management (president, chief)  
   -Middle management (director, manager)  
   -Operational management or lower management (team leader, supervisor)  
   -Operational workers (receptionists, clerks, factory workers)

**Structure of information**Information can be categorised by its structure. Elaborate under each of the following categories:

1. **Detailed reports**Detailed reports involve communication of all assembled records
2. **Summary Reports**Summary reports are a brief version of a detailed report that use totals and averages rather then reporting individual items.
3. **Aggregate reports**Aggregate reports only relate to one particular factor or subject
4. **Sample reports**Sample reports are sections of the detailed report that provides senior management with an idea of the overall situation
5. **Exception reports**Exception reports identifies data that shows a variation to the set or target results and helps managers identify situations that require action.

**Decision – making in organisations**Under each of the following four hierarchy levels within the organisation indicate the type and nature of decision made:

1. **Senior management decision making**Strategic decisions are made by senior management. They involve complicated problems that relate to the long term goals of an organisation. They often involve studying market trends, choosing new products to manufacture or market, analysing social, legal and environmental concerns, determining site locations and adjusting management structure
2. **Middle management decision making**Tactical decisions are made by middle management. This is were they solve problems that affect the running of the organisation. Each manager of each department are responsible for running their department. Middle management also make sure that the strategic decisions are successfully carried out.
3. **Operational management decision making**Operational decisions are made by the operational management team. They deal with day to day situations such as  
   -directing customer complaints  
   -Ordering stock  
   Replacing a worker who calls in sick  
   these decisions need to be made on the spot or within a short time frame.
4. **Operational workers decision making**Operational workers also make day to day decisions that help the efficient running of the business.
5. **Distinguish between a strategic decision and a tactical decision?**